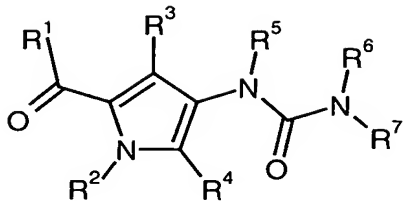
Claims

1. A compound of the formula



(I),

in which

R^1 is $-OR^8$ or $-NR^9R^{10}$,

R^2 is hydrogen, C_1-C_6-alkyl or aryl,

it being possible for alkyl R^2 to be substituted by 0, 1, 2 or 3 substituents R^{2-1} selected independently of one another from the group consisting of halogen, hydroxyl, C_1-C_6-alkoxy, hydroxycarbonyl, C_1-C_6-alkoxycarbonyl, C_1-C_6-alkylcarbonyloxy, amino, C_1-C_6-alkylamino, aminocarbonyl, C_1-C_6-alkylaminocarbonyl, C_3-C_8-cycloalkyl, 5- to 10-membered heterocyclyl, C_6-C_{10}-aryl, phenoxy and 5- to 10-membered heteroaryl,

in which cycloalkyl, heterocyclyl, aryl or heteroaryl R^{2-1} may be substituted by 0, 1, 2 or 3 substituents selected independently of one another from the group consisting of halogen, hydroxyl, oxo, nitro, cyano, trifluoromethyl, trifluoromethoxy, C_1-C_6-alkyl, C_1-C_6-alkoxy, hydroxycarbonyl, C_1-C_6-alkoxycarbonyl, amino, C_1-C_6-alkylamino, aminocarbonyl, C_1-C_6-alkylaminocarbonyl and phenyl,

it being possible for aryl R^2 to be substituted by 0, 1, 2 or 3 substituents R^{2-2} selected independently of one another from the group consisting of halogen, hydroxyl, nitro, cyano, trifluoromethyl, trifluoromethoxy, C_1-C_6-alkyl, C_1-C_6-alkoxy, hydroxycarbonyl, C_1-C_6-alkoxycarbonyl, amino, C_1-C_6-alkylamino, aminocarbonyl, C_1-C_6-alkylaminocarbonyl, C_3-C_8-cycloalkyl, 5-

to 10-membered heterocyclyl, C_6-C_{10}-aryl and 5- to 10-membered heteroaryl,

R^3 and R^4 independently of one another are hydrogen or C_1-C_6-alkyl,

R^5 and R^6 independently of one another are hydrogen or C_1-C_6-alkyl,

R^7 is 3- to 12-membered carbocyclyl,

it being possible for the carbocyclyl to be substituted by 0, 1, 2, 3, 4 or 5 substituents selected independently of one another from the group consisting of halogen, hydroxyl, C_1-C_6-alkyl and C_1-C_6-alkoxy,

R^8 is hydrogen or C_1-C_6-alkyl,

it being possible for alkyl R^8 to be substituted by 0, 1, 2 or 3 substituents R^{8-1} selected independently of one another from the group consisting of hydroxyl, amino, C_1-C_6-alkoxy, C_1-C_6-alkylamino, aminocarbonyl, C_1-C_6-alkylcarbonylamino, C_3-C_8-cycloalkyl, 5- to 10-membered heterocyclyl, C_6-C_{10}-aryl and 5- to 10-membered heteroaryl,

in which cycloalkyl, heterocyclyl, aryl or heteroaryl R^{8-1} may be substituted by 0, 1, 2 or 3 substituents selected independently of one another from the group consisting of halogen, hydroxyl, nitro, cyano, C_1-C_6-alkyl, C_1-C_6-alkoxy, hydroxycarbonyl, C_1-C_6-alkoxycarbonyl, amino, C_1-C_6-alkylamino, aminocarbonyl and C_1-C_6-alkylaminocarbonyl,

R^9 is hydrogen or C_1-C_6-alkyl,

it being possible for alkyl R^9 to be substituted by 0 or 1 substituent R^{9-1} selected from the group consisting of hydroxyl, C_1-C_6-alkoxy, hydroxycarbonyl, C_1-C_6-alkoxycarbonyl, amino, C_1-C_6-alkylamino, aminocarbonyl, C_1-C_6-alkylaminocarbonyl, C_3-C_8-cycloalkyl, 5- to 10-membered heterocyclyl, C_6-C_{10}-aryl and 5- to 10-membered heteroaryl,

in which cycloalkyl, heterocyclyl, aryl or heteroaryl R^{9-1} may be substituted by 0, 1, 2 or 3 substituents selected independently of one another from the

group consisting of halogen, hydroxyl, nitro, cyano, C_1-C_6-alkyl, C_1-C_6-alkoxy, hydroxycarbonyl, C_1-C_6-alkoxycarbonyl, amino, C_1-C_6-alkylamino, aminocarbonyl and C_1-C_6-alkylaminocarbonyl,

and

R^{10} is hydrogen, C_1-C_6-alkyl, C_3-C_8-cycloalkyl, 5- to 10-membered heterocyclyl, C_6-C_{10}-aryl or 5- to 10-membered heteroaryl,

it being possible for alkyl R^{10} to be substituted by 0, 1, 2 or 3 substituents R^{10-1} selected independently of one another from the group consisting of halogen, hydroxyl, C_1-C_6-alkoxy, hydroxycarbonyl, C_1-C_6-alkoxycarbonyl, amino, C_1-C_6-alkylamino, aminocarbonyl, C_1-C_6-alkylaminocarbonyl, C_3-C_8-cycloalkyl, 5- to 10-membered heterocyclyl, C_6-C_{10}-aryl and 5- to 10-membered heteroaryl,

in which cycloalkyl, heterocyclyl, aryl or heteroaryl R^{10-1} may be substituted by 0, 1, 2 or 3 substituents selected independently of one another from the group consisting of halogen, hydroxyl, oxo, nitro, cyano, trifluoromethyl, trifluoromethoxy, C_1-C_6-alkyl, C_1-C_6-alkoxy, hydroxycarbonyl, C_1-C_6-alkoxycarbonyl, amino, C_1-C_6-alkylamino, aminocarbonyl and C_1-C_6-alkylaminocarbonyl,

it being possible for cycloalkyl, heterocyclyl, aryl or heteroaryl R^{10} to be substituted by 0, 1, 2 or 3 substituents R^{10-2} selected independently of one another from the group consisting of halogen, hydroxyl, nitro, cyano, trifluoromethyl, trifluoromethoxy, C_1-C_6-alkyl, C_1-C_6-alkoxy, hydroxycarbonyl, C_1-C_6-alkoxycarbonyl, amino, C_1-C_6-alkylamino, aminocarbonyl and C_1-C_6-alkylaminocarbonyl,

or

R^9 and R^{10} together with the nitrogen atom to which they are attached form a 4- to 8-membered heterocycle which may contain up to two further heteroatoms from the series N, O and/or S,

it being possible for the heterocycle to be substituted by 0, 1, 2 or 3 substituents selected independently of one another from the group consisting of halogen, hydroxyl, C_1-C_6-alkyl, C_1-C_6-alkoxy, hydroxycarbonyl, C_1-C_6-alkoxycarbonyl, amino, C_1-C_6-alkylamino, aminocarbonyl and C_1-C_6-alkylaminocarbonyl,

or one of their salts, their solvates or the solvates of their salts.

2. The compound of claim 1, characterized in that

R^1 is $-OR^8$ or $-NR^9R^{10}$,

R^2 is hydrogen or C_1-C_4-alkyl,

it being possible for alkyl R^2 to be substituted by 0 or 1 substitutent R^{2-1} selected from the group consisting of hydroxyl, C_1-C_6-alkoxy, C_1-C_6-alkylcarbonyloxy, C_1-C_6-alkylaminocarbonyl, C_3-C_7-cycloalkyl, 5- to 6-membered heterocyclyl, phenyl, phenoxy and 5- to 6-membered heteroaryl,

in which cycloalkyl, heterocyclyl, phenyl or heteroaryl R^{2-1} may be substituted by 0, 1, 2 or 3 substituents selected independently of one another from the group consisting of halogen, hydroxyl, oxo, nitro, cyano, trifluoromethyl, trifluoromethoxy, C_1-C_6-alkyl, C_1-C_6-alkoxy, hydroxycarbonyl, C_1-C_6-alkoxycarbonyl, amino, C_1-C_6-alkylamino, aminocarbonyl, C_1-C_6-alkylaminocarbonyl and phenyl,

R^3 and R^4 are hydrogen,

R^5 and R^6 are hydrogen,

R^7 is 6- to 8-membered carbocyclyl,

it being possible for carbocyclyl R^7 to be substituted by 0, 1, 2, 3 or 4 substituents selected independently of one another from the group consisting of C_1-C_6-alkyl,

R^8 is C_1-C_4-alkyl,

it being possible for alkyl R^8 to be substituted by 0, 1 or 2 substituents R^{8-1} selected independently of one another from the group consisting of hydroxyl, amino, C_1-C_6-alkoxy, C_1-C_6-alkylamino, aminocarbonyl, C_1-C_6-alkylcarbonylamino, pyridyl, 1,2,4-triazol-1-yl and pyrazol-1-yl,

R^9 is hydrogen or C_1-C_6-alkyl,

it being possible for alkyl R^9 to be substituted by 0 or 1 substituent R^{9-1} selected from the group consisting of hydroxyl, C_1-C_6-alkoxy and amino,

and

R^{10} is hydrogen, C_1-C_6-alkyl, C_3-C_6-cycloalkyl or phenyl,

it being possible for alkyl R^{10} to be substituted by 0 or 1 substituent R^{10-1} selected from the group consisting of hydroxyl, C_1-C_6-alkoxy, C_1-C_6-alkylamino, C_5-C_7-cycloalkyl, 5- to 6-membered heterocyclyl, phenyl and 5- to 6-membered heteroaryl,

in which cycloalkyl, heterocyclyl, phenyl or heteroaryl R^{10-1} may be substituted by 0, 1, 2 or 3 substituents selected independently of one another from the group consisting of halogen, hydroxyl, nitro, cyano, trifluoromethyl, trifluoromethoxy, C_1-C_6-alkyl, C_1-C_6-alkoxy, hydroxycarbonyl, C_1-C_6-alkoxycarbonyl, amino, C_1-C_6-alkylamino, aminocarbonyl and C_1-C_6-alkylaminocarbonyl,

or

R^9 and R^{10} together with the nitrogen atom to which they are attached form a 5- to 6-membered heterocycle which may contain up to two further heteroatoms from the series N, O and/or S.

3. The compound of claim 1 or 2, characterized in that

R^1 is $-OR^8$ or $-NR^9R^{10}$,

R^2 is hydrogen or C_1-C_4-alkyl,

it being possible for alkyl R^2 to be substituted by 0 or 1 substituent R^{2-1} selected from the group consisting of methoxy, diethylaminocarbonyl, cyclopropyl, phenyl, phenoxy and pyridyl,

in which phenyl R^{2-1} may be substituted by 0, 1 or 2 substituents selected independently of one another from the group consisting of fluorine, chlorine, nitro, cyano, trifluoromethyl, methyl, methoxy and methyloxycarbonyl,

R^3 and R^4 are hydrogen,

R^5 and R^6 are hydrogen,

R^7 is bicyclo[2.2.1]heptyl,

it being possible for bicyclo[2.2.1]heptyl to be substituted by 0, 1, 2, 3 or 4 methyl groups,

R^8 is C_1-C_3-alkyl,

it being possible for alkyl R^8 to be substituted by 0 or 1 substituent R^{8-1} selected independently of one another from the group consisting of hydroxyl, dimethylamino, aminocarbonyl, methylcarbonylamino, pyridyl, 1,2,4-triazol-1-yl and pyrazol-1-yl,

R^9 is hydrogen,

and

R^{10} is hydrogen, C_1-C_4-alkyl, cyclopropyl or cyclopentyl,

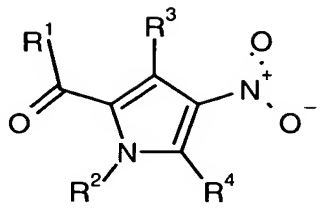
it being possible for alkyl R^{10} to be substituted by 0 or 1 substituent R^{10-1} selected from the group consisting of hydroxyl, methoxy, dimethylamino, phenyl, pyridyl and imidazol-1-yl,

in which phenyl R^{10-1} may be substituted by 0, 1 or 2 methoxy substituents.

4. A process for preparing a compound of the formula (I) of claim 1, characterized in that

according to process [A]

a compound of the formula



(IIa),

in which

R^1 is $-OR^8$,

R^8 is the optionally substituted alkyl indicated for R^8 in formula (I), and

R^2, R^3 and R^4 are as defined in claim 1,

is reacted in the first stage with a reducing agent,

in the second stage optionally with a compound of the formula

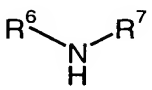
$$X^1\text{-}R^5 \qquad \text{(III)},$$

in which

R^5 is as defined in claim 1 and

X^1 is halogen, preferably bromine or chlorine,

and in the third stage, in the presence of a carbonic acid derivative, with a compound of the formula

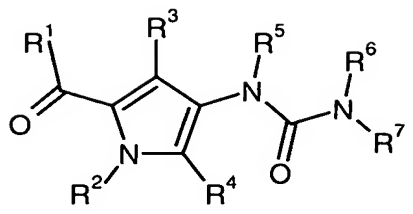


(IV),

in which

R^6 and R^7 are as defined in claim 1,

to give a compound of the formula



(Ia),

in which

R^1 is $-OR^8$,

R^8 has the definition as in formula (IIa), and

R^2, R^3, R^4, R^5, R^6 and R^7 are as defined in claim 1,

or

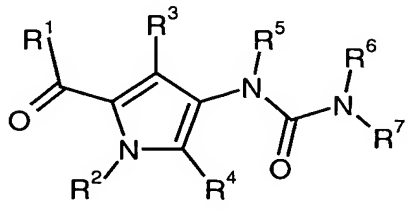
according to process [B]

a compound of the formula (Ia)

in which

R^8 is methyl or ethyl,

are reacted in the presence of a base to give a compound of the formula



(Ib),

in which

R^1 is $-OR^8$,

R^8 is hydrogen, and

R^2, R^3, R^4, R^5, R^6 and R^7 are as defined in claim 1,

or

according to process [C]

a compound of the formula (Ib) is reacted with a compound of the formula

$$R^1\text{-}H \quad (V),$$

in which

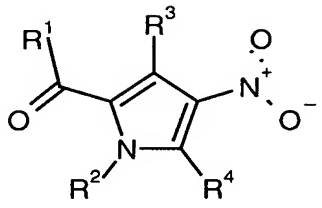
R^1 is as defined in claim 1,

in the presence of dehydrating reagents to give a compound of the formula (I),

or

according to process [D]

a compound of the formula



(IIb),

in which

R^1 is $-NR^9R^{10}$, and

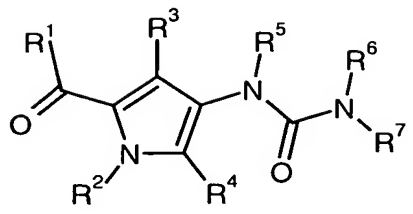
R^2, R^3, R^4, R^9 and R^{10} are as defined in claim 1,

is reacted in the first stage with a reducing agent,

in the second stage optionally with a compound of the formula (III)

and in the third stage, in the presence of a carbonic acid derivative, with a compound of the formula (IV)

to give a compound of the formula



(Ic),

in which

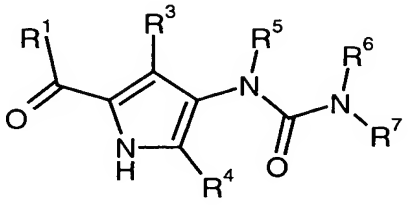
R^1 is $-NR^9R^{10}$, and

R^2, R^3, R^4, R^5, R^6, R^7, R^9 and R^{10} are as defined in claim 1,

or

according to process [E]

a compound of the formula



(Id),

in which

R^1, R^3, R^4, R^5, R^6 and R^7 are as defined in claim 1,

is reacted with a compound of the formula

$$X^2\text{-}R^2 \qquad \text{(VIII)},$$

in which

R^2 is as defined in claim 1, and

X^2 is halogen, preferably bromine or chlorine,

to give a compound of the formula (I).

5. The compound of any one of claims 1 to 3 for the treatment and/or prophylaxis of diseases.

6. A medicament comprising a compound as in any one of claims 1 to 3 in combination with at least one inert, nontoxic, pharmaceutically appropriate excipient.

7. The use of a compound of any one of claims 1 to 3 for producing a medicament for the treatment and/or prophylaxis of viral infections.

8. The use of claim 7, characterized in that the viral infection is an infection with human cytomegalovirus (HCMV) or with another representative of the group of Herpes viridae.

9. The medicament of claim 6 for the treatment and/or prophylaxis of viral infections.

10. A method of controlling viral infections in humans and animals by administering an antivirally active amount of at least one compound of any one of claims 1 to 3 or of at least one medicament of claim 6, 7 or 8.